Skin disorders. There have been anecdotal reports of nicotine producing beneficial effects in various skin disorders, including pyoderma gangrenosum,[1] and dermatitis due to fluorouracil therapy.[2]

1. Kanekura T, *et al.* Nicotine for pyoderma gangrenosum. *Lancet* 1995; **345:** 1058.
2. Kingsley EC. 5-Fluorouracil dermatitis prophylaxis with a nicotine patch. *Ann Intern Med* 1994; **120:** 813.

Smoking cessation. Smoking is the single most important cause of preventable illness and premature death in the UK and USA; it is estimated that around 1 in 5 deaths are due to smoking-related illnesses. The financial burden of smoking-related diseases on healthcare providers is also substantial. Many governments have undertaken initiatives to promote smoking cessation for which there is substantial evidence of a decline in the risk of disease[1] and death.[2] As the abstinence period increases, the reduced risk of disease in former smokers may even approach, although rarely does it ever equal, that of people who have never smoked.[1].

Nicotine dependence and the development of a characteristic withdrawal syndrome (see Dependence and Withdrawal, above) make stopping smoking very difficult. Many individuals relapse when trying to give up or need several attempts before successfully stopping. Both nonpharmacological and pharmacological treatments can improve the abstinence rate and are most effective when the two approaches are combined.[3-12]

Nonpharmacological methods include counselling, training in coping skills, and support groups; although the abstinence rate increases with the intensity of the support, even brief advice is effective in encouraging cessation.

The first-line pharmacological intervention is *nicotine replacement therapy* (NRT) which is an effective treatment for reducing the cravings associated with stopping smoking. NRT is available in numerous formulations: chewing gum, transdermal patches, inhalators, nasal sprays, sublingual tablets, and lozenges. A systematic review[10] of NRT found abstinence was more than doubled when compared with controls, regardless of the intensity of any additional nonpharmacological support.

Choice of formulation is based on patient preference, tolerance, and previous treatments, if any. The transdermal patch is easiest to use and compliance is greatest with this route but local effects may be troublesome. The gum has an unpleasant taste initially and some find the chewing action difficult. The sublingual tablet may be useful for those who have difficulty chewing the gum. The nasal spray has a fast onset of action but may cause local irritation. The inhalator has the advantage of simulating cigarette smoking but may cause local irritation of the mouth and throat. The lozenge has the advantage that it can be sucked discreetly. Patients who are unable to tolerate one type of NRT may benefit from a course of an alternative NRT preparation.

Combination therapy with different types of NRT (patches with either the nasal spray, inhalator, or chewing gum) has also been tried as a means of increasing efficacy.

NRT for smoking cessation is usually continued for about 3 months before being withdrawn. Although the manufacturers advise gradual withdrawal, others[6,8] have found that this offers no advantage and recommend abrupt withdrawal. NRT for smoking reduction is typically continued for longer periods. NRT has also been used long-term and may be of particular benefit in those patients who feel they would relapse if NRT was stopped or in those who have persistent withdrawal symptoms.

There has been concern over the use of NRT in patients with cardiovascular disease (see Effects on the Cardiovascular System, above) but clinical experience and studies have shown that NRT can be used with caution in these patients. The use of NRT in those who have suffered a recent myocardial infarction or those with severe arrhythmias or unstable angina is, however, contraindicated as such patients have not been adequately studied.

A number of other drugs have also been used to achieve abstinence from smoking.[13-15] *Bupropion* is effective and recommended by some as a first-line alternative to NRT; its action is said to be independent of its antidepressant activity. Bupropion in combination with NRT has been used successfully. Evidence to support the use of most other antidepressants is lacking,[16] but *nortriptyline* appears to be effective and is used as a second-line drug. A study[17] found, however, that there was no advantage in combining nortriptyline with NRT. *Clonidine* is also effective but adverse effects limit its usefulness.[15] Preliminary investigations suggest that *selegiline* and *mecamylamine* may be effective.[13,15] The cannabinoid-1 receptor antagonist *rimonabant* has produced promising results in early studies,[13,14] although a systematic review[18] of 3 randomised controlled studies found the evidence to be inconclusive. A systematic review[19] of studies on the use of the oral nicotine receptor partial agonists *varenicline* and *cytisine* concluded that both drugs have a potential place in smoking cessation. Varenicline compared favourably with placebo and bupropion in helping smokers to quit, but its efficacy in preventing relapse still remains to be fully established. Like bupropion, varenicline is recommended by some as a first-line alternative to NRT. Cytisine is widely used in central and eastern Europe but the current evidence for efficacy is limited and better designed studies are required to test earlier findings. There is little or no evidence to support the efficacy of other treatments such as *silver acetate*, *lobeline*, or *anxiolytics* such as *buspirone*, and their use is not recommended. A *vaccine* for the prevention of smoking relapse is under investigation.[13,14]

1. Dresler CM, *et al.* Reversal of risk upon quitting smoking. *Lancet* 2006; **368:** 348–9.
2. Vollset SE, *et al.* Smoking and deaths between 40 and 70 years of age in women and men. *Ann Intern Med* 2006; **144:** 381–9.
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4. Anonymous. Nicotine replacement to aid smoking cessation. *Drug Ther Bull* 1999; **37:** 52–4.
5. West R, *et al.* Smoking cessation guidelines for health professionals: an update. *Thorax* 2000; **55:** 987–99.
6. Royal College of Physicians. *Nicotine addiction in Britain: a report of the Tobacco Advisory Group of the Royal College of Physicians*. London: Royal College of Physicians, 2000. Also available at: http://www.rcplondon.ac.uk/pubs/books/nicotine/index.htm (accessed 02/07/04)
7. Fiore MC, *et al.* A clinical practice guideline for treating tobacco use and dependence: a US public health service report. *JAMA* 2000; **283:** 3244–54.
8. Simpson D. Smoking cessation. In: *Doctors and tobacco: medicine's big challenge*. London: Tobacco Control Resource Centre, British Medical Association, 2000. Also available at: http://www.bma.org.uk/tcrc.nsf/4723e4b3bbc9362e802566e300360f8e/d51b23fb23791f22802568ab00668cf1/06.00FILE/D&T_EN.pdf (accessed 14/07/06)
9. Covey LS, *et al.* Advances in non-nicotine pharmacotherapy for smoking cessation. *Drugs* 2000; **59:** 17–31.
10. Stead LF, *et al.* Nicotine replacement therapy for smoking cessation. Available in The Cochrane Database of Systematic Reviews; Issue 1. Chichester: John Wiley; 2008 (accessed 09/07/08).
11. Nides M. Update on pharmacologic options for smoking cessation treatment. *Am J Med* 2008; **121** (suppl 1): S20–S31.
12. Ranney L, *et al.* Systematic review: smoking cessation intervention strategies for adults and adults in special populations. *Ann Intern Med* 2006; **145:** 845–56.
13. Foulds J, *et al.* Developments in pharmacotherapy for tobacco dependence: past, present and future. *Drug Alcohol Rev* 2006; **25:** 59–71.
14. Garwood CL, Potts LA. Emerging pharmacotherapies for smoking cessation. *Am J Health-Syst Pharm* 2007; **64:** 1693–8. Correction. *ibid.*; 1995.
15. Buchhalter AR, *et al.* Novel pharmacological approaches for treating tobacco dependence and withdrawal: current status. *Drugs* 2008; **68:** 1067–88.
16. Hughes JR, *et al.* Antidepressants for smoking cessation. Available in The Cochrane Database of Systematic Reviews; Issue 1. Chichester: John Wiley; 2007 (accessed 09/07/08).
17. Aveyard P, *et al.* Nortriptyline plus nicotine replacement versus placebo plus nicotine replacement for smoking cessation: pragmatic randomised controlled trial. *BMJ* 2008; **336:** 1223–7.
18. Cahill K, Ussher M. Cannabinoid type 1 receptor antagonists (rimonabant) for smoking cessation. Available in The Cochrane Database of Systematic Reviews; Issue 4. Chichester: John Wiley; 2007 (accessed 09/07/08).
19. Cahill K, *et al.* Nicotine receptor partial agonists for smoking cessation. Available in The Cochrane Database of Systematic Reviews; Issue 1. Chichester: John Wiley; 2007 (accessed 28/06/07).

Spasticity. There have been anecdotal reports[1] of beneficial responses to nicotine in spastic dystonia.

1. Vaughan CJ, *et al.* Treatment of spastic dystonia with transdermal nicotine. *Lancet* 1997; **350:** 565.

Tics. Tourette's syndrome (see Tics, p.954) is characterised by motor and vocal tics and behavioural disturbances. Nicotine[1-5] has been reported to be of benefit when used alone or with the more usual treatment of haloperidol in patients with Tourette's syndrome whose symptoms were not satisfactorily controlled with haloperidol alone. It is hoped that the use of transdermal nicotine patches will avoid the reported problems of compliance associated with the taste and gastrointestinal effects of nicotine gum.

1. McConville BJ, *et al.* The effects of nicotine plus haloperidol compared to nicotine only and placebo nicotine only in reducing tic severity and frequency to Tourette's disorder. *Biol Psychiatry* 1992; **31:** 832–40.
2. Silver AA, Sanberg PR. Transdermal nicotine patch and potentiation of haloperidol in Tourette's syndrome. *Lancet* 1993; **342:** 182.
3. Dursun SM, *et al.* Longlasting improvement of Tourette's syndrome with transdermal nicotine. *Lancet* 1994; **344:** 1577.
4. Sanberg PR, *et al.* Nicotine for the treatment of Tourette's syndrome. *Pharmacol Ther* 1997; **74:** 21–5.
5. Silver AA, *et al.* Transdermal nicotine and haloperidol in Tourette's disorder: a double-blind placebo-controlled study. *J Clin Psychiatry* 2001; **62:** 707–14.

Ulcerative colitis. Investigation of the use of nicotine in ulcerative colitis (see Inflammatory Bowel Disease, p.1697) has been prompted by the observation that this condition is rare in smokers.[1] A systematic review[2] found that transdermal nicotine was more effective than placebo in producing remission in patients with active ulcerative colitis, but appeared to be no more effective than standard therapy with a corticosteroid or aminosalicylate, and was associated with more adverse effects. It appears to be ineffective in maintaining disease remission.[3] Any role is likely to be limited to patients who do not respond to standard therapy and who can tolerate the adverse effects.[2] Local delivery to the colon, in the form of enemas[4-6] and oral modified-release capsules,[7] is under investigation as a means of reducing the adverse effects of nicotine.

1. Guslandi M. Nicotine treatment for ulcerative colitis. *Br J Clin Pharmacol* 1999; **48:** 481–4.
2. McGrath J, *et al.* Transdermal nicotine for induction of remission in ulcerative colitis. Available in The Cochrane Database of Systematic Reviews; Issue 4. Chichester: John Wiley; 2004 (accessed 08/03/06).
3. Thomas GAO, *et al.* Transdermal nicotine as maintenance therapy for ulcerative colitis. *N Engl J Med* 1995; **332:** 988–92.
4. Sandborn WJ, *et al.* Nicotine tartrate liquid enemas for mildly to moderately active left-sided ulcerative colitis unresponsive to first-line therapy: a pilot study. *Aliment Pharmacol Ther* 1997; **11:** 663–71.
5. Ingram JR, *et al.* Nicotine enemas for treatment of ulcerative colitis: a study of the pharmacokinetics and adverse events associated with three doses of nicotine. *Aliment Pharmacol Ther* 2004; **20:** 859–65.
6. Ingram JR, *et al.* A randomized trial of nicotine enemas for active ulcerative colitis. *Clin Gastroenterol Hepatol* 2005; **3:** 1107–14.
7. Green JT, *et al.* An oral formulation of nicotine for release and absorption in the colon: its development and pharmacokinetics. *Br J Clin Pharmacol* 1999; **48:** 485–93.

Preparations

USP 31: Nicotine Polacrilex Gum; Nicotine Transdermal System.

Proprietary Preparations (details are given in Part 3)

Arg.: Nicorette; Nicotinell TTS; ***Austral.:*** Nicabate; Nicorette; Nicotinell; QuitX; ***Austria:*** Nicorette; Nicotinell; Nicotrol; ***Belg.:*** Nicorette; Nicotinell; NiQuitin; ***Braz.:*** Nicorette; Nicotinell TTS; NiQuitin; ***Canad.:*** Habitrol; Nicoderm; Nicorette; Nicotrol; Prostep; ***Chile:*** Nicorette; Nicotinell; ***Cz.:*** Nicopass; Nicopatch; Nicorette; Nicotinell; NiQuitin; ***Denm.:*** Nicorette; Nicotinell; NiQuitin†; ***Fin.:*** Nicorette; Nicotinell; ***Fr.:*** Nicogum; Nicopass; Nicopatch; Nicorette; Nicotinell; NiQuitin; ***Ger.:*** Nicorette; Nicotinell; nikofrenon; NiQuitin; ***Gr.:*** Nicopass; Nicorette; Nicotinell; ***Hong Kong:*** Nicorette; Nicotinell; ***Hung.:*** Nicopass; Nicorette; Nicotinell; NiQuitin; ***India:*** Nicotinell TTS†; ***Irl.:*** Nicorette; Nicotinell; NiQuitin; ***Israel:*** Nicorette; Nicotinell; NiQuitin; ***Ital.:*** Nicorette; Nicotinell; NiQuitin; ***Malaysia:*** Nicorette; Nicotinell; ***Mex.:*** Nicorette; Nicotinell TTS†; NiQuitin; ***Neth.:*** Nicorette; Nicotinell; NiQuitin; ***Norw.:*** Nicorette; Nicotinell; ***NZ:*** Habitrol; Nicabate; Nicorette; Nicotinell; Nicotrol; ***Pol.:*** Nicorette; Nicotinell; NiQuitin; ***Port.:*** Nicopass; Nicopatch; Nicorette; Nicotinell TTS; NiQuitin; ***Rus.:*** Nicorette (Никоретте); ***S.Afr.:*** Nicorette; Quit; ***Singapore:*** Nicorette; Nicotinell; ***Spain:*** Nicomax; Nicorette; Nicotinell; Nicotrol†; NiQuitin; ***Swed.:*** Nicorette; Nicotinell; Nikotugg; NiQuitin; ***Switz.:*** Nicorette; Nicotinell; ***Thai.:*** Nicorette; Nicotinell; ***Turk.:*** Nicotinell; ***UK:*** Nicopass; Nicopatch; Nicorette; Nicotinell; NiQuitin; ***USA:*** Commit; Habitrol; Nicoderm; Nicorette; Nicotrol; Prostep; ***Venez.:*** Nicorette†.

Nitisinone *(USAN, rINN)*

Nitisinonum; NTBC; SC-0735. 2-(α,α,α-Trifluoro-2-nitro-*p*-toluoyl)-1,3-cyclohexanedione.

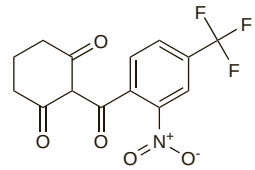
Нитизинон

$C_{14}H_{10}F_3NO_5$ = 329.2.

CAS — 104206-65-7.

ATC — A16AX04.

ATC Vet — QA16AX04.



Profile

Nitisinone is a 4-hydroxyphenylpyruvate dioxygenase inhibitor used in the management of hereditary tyrosinaemia type 1; dietary restriction of tyrosine and phenylalanine is also necessary. An initial daily dose of 1 mg/kg given orally is recommended; daily dosage should be given in 2 divided doses, which may be unequally split. Monitoring of urine succinylacetone and plasma alpha-fetoprotein, as well as liver function tests, must be carried out. If necessary, the daily dose may be increased to 1.5 mg/kg after one month; the maximum daily dose is 2 mg/kg. If satisfactory results are obtained from biochemical testing, doses should only be increased in line with body-weight gain.

Adverse effects have included granulocytopenia, leucopenia, and thrombocytopenia; regular monitoring of platelet and white cell counts is recommended. Eye disorders may occur due to increases in plasma tyrosine; they include conjunctivitis, corneal opacity, keratitis, photophobia, and eye pain. Slit-lamp examination of the eyes is recommended before starting treatment; patients developing visual disturbances during treatment should be referred to an ophthalmologist immediately, and further dietary restrictions implemented if plasma tyrosine is too high. Although it is not known if nitisinone is excreted into human milk, breast feeding is contra-indicated because of the potential effects on a suckling child.

Nitisinone is under investigation for the treatment of alkaptonuria, another hereditary metabolic disorder.

◊ References.

1. Holme E, Lindstedt S. Tyrosinaemia type I and NTBC (2-(2-nitro-4-trifluoromethylbenzoyl)-1,3-cyclohexanedione). *J Inherit Metab Dis* 1998; **21:** 507–17.
2. Phornphutkul C, *et al.* Natural history of alkaptonuria. *N Engl J Med* 2002; **347:** 2111–21.

3. Gissen P, *et al*. Ophthalmic follow-up of patients with tyrosinaemia type I on NTBC. *J Inherit Metab Dis* 2003; **26:** 13–16.
4. Joshi SN, Venugopalan P. Experience with NTBC therapy in hereditary tyrosinaemia type I: an alternative to liver transplantation. *Ann Trop Paediatr* 2004; **24:** 259–65.
5. Suwannarat P, *et al*. Use of nitisinone in patients with alkaptonuria. *Metabolism* 2005; **54:** 719–28.
6. McKiernan PJ. Nitisinone in the treatment of hereditary tyrosinaemia type 1. *Drugs* 2006; **66:** 743–50.

Preparations

Proprietary Preparations (details are given in Part 3)

Belg.: Orfadin; ***Cz.:*** Orfadin; ***Denm.:*** Orfadin; ***Fin.:*** Orfadin; ***Fr.:*** Orfadin; ***Ger.:*** Orfadin; ***Neth.:*** Orfadin; ***Port.:*** Orfadin; ***Spain:*** Orfadin; ***Swed.:*** Orfadin; ***USA:*** Orfadin.

Nitric Acid

Acide nitrique; Acidum nitricum; Acidum Nitricum 70%; Aqua Fortis; Azotic Acid; Kwas azotowy; Kyselina dusičná 70%; Nit. Acid; Nitrato rūgštis; Nítrico, ácido; Salétromsav; Salpetersäure; Salpetersyra; Typpihappo.

HNO_3 = 63.01.

CAS — 7697-37-2.

Pharmacopoeias. In *Eur.* (see p.vii) (68 to 70%). Also in *USNF* (69 to 71%).

Ph. Eur. 6.2 (Nitric Acid). A clear, colourless to almost colourless liquid. Miscible with water. It contains 68.0 to 70.0% w/w of HNO_3. Protect from light.

USNF 26 (Nitric Acid). A highly corrosive fuming liquid, having a characteristic, highly irritating odour. It contains 69.0 to 71.0% w/w of HNO_3. Store in airtight containers.

Adverse Effects and Treatment

As for Hydrochloric Acid, p.2322.

There may be methaemoglobinaemia. Nitric acid stains the skin yellow.

Effects on the respiratory system. Respiratory failure due to pulmonary oedema occurred in a 56-year-old man after inhaling nitric acid which he had used as a metal cleaner.[1] The man died despite extensive ventilatory support.

1. Bur A, *et al*. Fatal pulmonary edema after nitric acid inhalation. *Resuscitation* 1997; **35:** 33–6.

Uses and Administration

Nitric acid has a powerful corrosive action and has been used to remove warts (p.1584), but it should be applied with caution, and less corrosive substances are available. It has also been used for the removal of tattoos.

Preparations

Proprietary Preparations (details are given in Part 3)

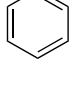
Multi-ingredient: ***Cz.:*** Solcogyn†; ***Ger.:*** Solco-Derman; ***Hong Kong:*** Solcoderm; ***Malaysia:*** Solcoderm†; ***Pol.:*** Solcogyn; ***Rus.:*** Solcoderm (Солкодерм); Solcovagin (Солковагин); ***Switz.:*** Solcoderm; Solcogyn.

Nitrobenzene

Aceite de mirbana; Nitrobenceno; Nitrobenzen; Nitrobenzol; Oil of Mirbane.

$C_6H_5NO_2$ = 123.1.

CAS — 98-95-3.



Adverse Effects

Nitrobenzene is highly toxic and the ingestion of 1 g may be fatal. Poisoning may occur from absorption through the skin, by inhalation, or by ingestion. Toxic effects are usually delayed for several hours and may include nausea, prostration, burning headache, methaemoglobinaemia with cyanosis, haemolytic anaemia, vomiting (with characteristic odour), convulsions, and coma, ending in death after a few hours.

Treatment of Adverse Effects

Although the benefit of gastric decontamination following ingestion of nitrobenzene is uncertain, gastric lavage or activated charcoal may be considered if given within 1 hour of ingestion. Methaemoglobinaemia may be treated with methylthioninium chloride. Oxygen should be given if cyanosis is severe.

If the skin or eyes are splashed with nitrobenzene, contaminated clothing should be removed immediately and the affected areas washed thoroughly with water at room temperature for at least 15 minutes.

Uses

Nitrobenzene is used in the manufacture of aniline, as a preservative in polishes, and in perfumery and soaps.

Nix-0699

Hemoxin; Nicosan; Niprisan.

Profile

Nix-0699 is an extract of the leaf of *Sorghum bicolor* (sorghum), the stem of *Pterocarpus osun* (camwood), the seed of *Piper guineense* (Ashanti or Benin pepper), and the flower of *Syzygium aromaticum*; *Eugenia caryophyllus* (clove). It is being investigated in the treatment of sickle-cell disease.

◊ Reviews.

1. Cordeiro NJV, Oniyangi O. Phytomedicines (medicines derived from plants) for sickle cell disease. Available in The Cochrane Database of Systematic Reviews; Issue 3. Chichester: John Wiley; 2004 (accessed 19/08/08).

Nucleic Acid

Acide Zymonucléique; Acidum Nucleicum; Nucleico, ácido; Nucleinic Acid.

Нуклеиновая Кислота

Profile

Nucleic acids, which are present in all cellular organisms and viruses, are composed of high molecular weight polynucleotides. A nucleotide is a phosphate ester of a nucleoside, which is made up of either a purine or pyrimidine nitrogenous base attached to a pentose sugar by an *N*-glycosidic linkage. Diester phosphate linkages between the sugar moieties produce a polynucleotide strand. Nucleic acids are of two types: deoxyribonucleic acid (DNA) (p.2293) and ribonucleic acid (RNA) (p.2379). Synthetic or recombinant nucleic acids are used in gene therapy (p.2310).

Since the administration of nucleic acid gives rise to a marked temporary leucocytosis (usually preceded by a short period of leucopenia) it was formerly given in the treatment of a variety of bacterial infections in the hope of enhancing the natural defence mechanisms. Its therapeutic value, however, has never been established.

Preparations

Proprietary Preparations (details are given in Part 3)

India: Nulip.

Nutmeg

Muscade; Myristica; Noz Moscada; Nuez moscada; Nux Moschata.

Description. Nutmeg consists of the dried kernels of the seeds of *Myristica fragrans* (Myristicaceae), containing not less than 5% v/w of volatile oil; the powdered drug contains not less than 4% v/w. Mace (see Mace Oil, p.2336) is the dried arillus of the seed of *M. fragrans*.

Pharmacopoeias. In *Chin.*

Adverse Effects

Nutmeg, taken in large doses, may cause nausea and vomiting, flushing, dry mouth, tachycardia, stimulation of the CNS possibly with epileptiform convulsions, miosis or occasionally mydriasis, euphoria, and hallucinations. Myristicin and elimicin are thought to be the constituents responsible for the psychotic effects of nutmeg, possibly because of metabolism to amfetamine-like compounds.

◊ Some references to the adverse effects of nutmeg.

1. Panayotopoulos DJ, Chisholm DD. Hallucinogenic effect of nutmeg. *BMJ* 1970; **1:** 754.
2. Venables GS, *et al*. Nutmeg poisoning. *BMJ* 1976; **1:** 96.
3. Dietz WH, Stuart MJ. Nutmeg and prostaglandins. *N Engl J Med* 1976; **294:** 503.
4. Faguet RA, Rowland KF. "Spice cabinet" intoxication. *Am J Psychiatry* 1978; **135:** 860–1.
5. Abernethy MK, Becker LB. Acute nutmeg intoxication. *Am J Emerg Med* 1992; **10:** 429–30.
6. Brenner N, *et al*. Chronic nutmeg psychosis. *J R Soc Med* 1993; **86:** 179–80.
7. Quin GI, *et al*. Nutmeg intoxication. *J Accid Emerg Med* 1998; **15:** 287–8.
8. Sangalli BC, Chiang W. Toxicology of nutmeg abuse. *J Toxicol Clin Toxicol* 2000; **38:** 671–8.
9. Stein U, *et al*. Nutmeg (myristicin) poisoning—report on a fatal case and a series of cases recorded by a poison information centre. *Forensic Sci Int* 2001; **118:** 87–90.

Uses and Administration

Nutmeg is the source of nutmeg oil (below). It is aromatic and carminative and is used as a flavour. Nutmeg has been reported to inhibit prostaglandin synthesis.

Homoeopathy. Nutmeg has been used in homoeopathic medicines under the following names: Myristica fragrans; Nux moschata; Nux. mos.

Preparations

Proprietary Preparations (details are given in Part 3)

Multi-ingredient: ***Austria:*** Mariazeller; ***Braz.:*** Paratonico; ***Cz.:*** Dr Theiss Schwedenbitter; Klosterfrau Melisana; Naturland Grosser Swedenbitter†; Original Schwedenbitter; ***Ger.:*** Doppelherz Melissengeist†; Melissengeist; ***Pol.:*** Melisana Klosterfrau; ***Rus.:*** Doppelherz Melissa (Доппельгерц Мелисса); Fitovit (Фитовит); Himcolin (Химколин); Original Grosser Bittner Balsam (Оригинальный Большой Бальзам Биттнера); ***S.Afr.:*** Entressdruppels HM; Melissengeist; Rooilavental; Spiritus Contra Tussim Drops; ***Spain:*** Agua del Carmen; ***Switz.:*** Alcoolat de Melisse†; ***UK:*** Melissa Comp..

Nutmeg Oil

Ätherisches Muskatöl; Esencia de Nuez Moscada; Essence de Muscade; Essência de Moscada; Muškátovníková silice; Muskatų eterinis aliejus; Muskotolja; Muskottiöljy; Myristica Oil; Myristicae Etheroleum; Myristicae fragrantis aetheroleum; Noix muscade, huile essentielle de; Nuez moscada, aceite esencial de; Oleum Myristicae; Szerecsendióolaj.

Pharmacopoeias. In *Eur.* (see p.vii).

Ph. Eur. 6.2 (Nutmeg Oil). The oil obtained by steam distillation of the dried and crushed kernels of *Myristica fragrans*. A colourless to pale yellow liquid with a spicy odour. Store in well-filled, airtight containers. Protect from light and heat.

Profile

Nutmeg oil is aromatic and carminative and is used as a flavour. Nutmeg oil and expressed nutmeg oil, a solid fat, are rubefacient. Nutmeg oil is also used in aromatherapy.

Preparations

BP 2008: Aromatic Ammonia Spirit.

Proprietary Preparations (details are given in Part 3)

Multi-ingredient: ***Austral.:*** Vicks Vaporub; ***Austria:*** Emser Nasensalbe; Expectal-Balsam; Pe-Ce; Wick Vaporub; ***Belg.:*** Vicks Vaporub; ***Braz.:*** Vick Vaporub; ***Canad.:*** Vaporizing Ointment; ***Chile:*** Agua Melisa Carminativa; ***Fr.:*** Vegebom; Vicks Vaporub; ***Ger.:*** Emser Nasensalbe N†; esto-gast; ***NZ:*** Vicks Vaporub; ***Pol.:*** Argol Essenza Balsamica; Argol Grip; Argol Rheuma; Wick Vaporub; ***Rus.:*** Carmolis (Кармолис)†; Carmolis Fluid (Кармолис Жидкость)†; Doktor Mom (Доктор Мом); ***S.Afr.:*** Balsem Vita GEEL; Balsem Vita ROOI; Balsem Vita WIT; Enterodyne; Stuidruppels; Vicks Vaporub; ***Swed.:*** Vicks Vaporub†; ***Switz.:*** Carmol; Carmol Plus†; Eucapinol; Frixo-Dragon Vert†; Vicks Vaporub N; ***Thai.:*** Tiffyrub†; ***Turk.:*** Vicks Vaporub; ***UK:*** Dragon Balm; No-Sor Vapour Rub; Nowax; ***USA:*** Vicks Vaporub.

Nux Vomica

Brechnuss; Noce Vomica; Noix Vomique; Nuez vómica; Strychni Semen.

CAS — 357-57-3 (anhydrous brucine).

Pharmacopoeias. In *Chin.* and *Jpn.*

Profile

Nux vomica consists of the dried ripe seeds of *Strychnos nux-vomica* (Loganiaceae). It has the actions of strychnine (see p.2393). As well as containing strychnine, nux vomica contains brucine which has similar properties.

Nux vomica is used in herbal medicine for a wide variety of disorders including those of digestion or debility.

Homoeopathy. Nux vomica has been used in homoeopathic medicines under the following names: Nux vom.; Strychnos nux-vomica.

The dried ripe seeds of *Strychnos ignatii* have been used in homoeopathic medicines under the following names: Iamara; Ignatia; Ignatia amara; Ign..

Preparations

Proprietary Preparations (details are given in Part 3)

Braz.: Cessagripe†.

Multi-ingredient: ***Braz.:*** Estomafitino†; Gotas Digestivas; Kola Fosfatada Soel†; ***Chile:*** Fenokomp 39; Fenolftaleina Compuesta†; Homeofortin III†; ***Ital.:*** Lassatina†; ***Mex.:*** Bigenol; ***Philipp.:*** BSI Medicated Spray; ***Rus.:*** Tentex (Тентекс); ***Spain:*** Alofedina; ***Switz.:*** Padma-Lax; Padmed Laxan; ***Thai.:*** Flatulence.

Oak Bark

Ąžuolų žievė; Chêne, écorce de; Common Oak; Corteza de roble; Dubová kůra; Durmast Oak; Écorce de Chêne; Eichenrinde; Ekbark; Kora dębowa; Quercus; Quercus cortex; Tammenkuori; Tölgyfakéreg.

Pharmacopoeias. In *Eur.* (see p.vii).

Ph. Eur. 6.2 (Oak Bark). The cut and dried bark from the fresh young branches of *Quercus robur*, *Q. petraea*, and *Q. pubescens*. It contains a minimum of 3.0% of tannins, expressed as pyrogallol, calculated with reference to the dried drug.

Profile

Oak bark contains quercitannic acid. It has astringent properties and is used in some herbal preparations. It was formerly used for haemorrhoids and as a gargle.

Homoeopathy. Oak bark has been used in homoeopathic medicines under the following names: Quercus.